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EXAMINER	
KAO, WEI PO ERIC	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/739,889	STEPHENS ET AL.
	Examiner	Art Unit
	Wei-po Kao	2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 September 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejection - 35 USC § 103

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 5, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCrady et al, U.S. Publication No 20010053699 in view of Vanderspool II, U.S. Patent 6108588.

Regarding Claim 1, McCrady et al disclose that **a method for determining an approximate location of a target node communicatively coupled to a network, the method comprising** (see Abstract, Figure 1, Paragraph [0029] Line 1-5): **determining reference latencies amongst a plurality of reference nodes** (see Paragraph [0045]); **measuring a target latency between**

the target node and at least one of the reference nodes, the target latency including information regarding communication latency between the target node and the at least one reference node (see Figure 1 Elements 12, 14, 16, 18 and 20, Paragraph [0029] Line 5-16); **approximating a geographic region within which the target node is located** (see Paragraph [0029] Line 20-24). However, McCrady et al do not disclose that **the reference latencies including information regarding communication latencies amongst the plurality of reference nodes and excluding information regarding communication latencies between the target node and any one of the plurality of reference nodes; the approximating a geographic region comprises accessing reference latencies associated with the at least one reference node and comparing the reference latencies with the target latency to thereby approximate the geographic region**. Vanderspool II from the same field of endeavor discloses that **the reference latencies including information regarding communication latencies amongst the plurality of reference nodes and excluding information regarding communication latencies between the target node and any one of the plurality of reference nodes** (see Abstract, Figure 1, Column 2 Line 30-35, Column 4 Line 20-25 i.e. in Vanderspool's invention, base stations are the reference nodes, which correspond to McCrady's reference radios; the RTD values only involve base stations); **the approximating a geographic region comprises accessing reference latencies associated with the at least one reference node and comparing the reference latencies with the target latency to thereby approximate the geographic region** (see Column 2 Line 20-45, Column 3 Line 15-26, Column 4 Line 20-50, Column 5 Line 20-67 i.e. calculation of TDOA, which further yields a location estimation, is a result of comparison between the reference latency information, RTD and target latency

information, OTD). At the time of the invention, it would have been obvious to a person ordinary skill in the art to obtain additional reference latency information not involves the input from a target node. The motivation would have been that errors due to asynchronous clock measurements from the network devices can be eliminated and further improves the accuracy of the location estimation (see Column 1 Line 54-67, Column 2 Line 1-7).

Regarding Claim 5, McCrady et al disclose all the limitations except that **determining communication latencies amongst a plurality of reference nodes for a plurality of time-slots.** Vanderspool II from the same field of endeavor discloses that **determining communication latencies amongst a plurality of reference nodes for a plurality of time-slots** (see Column 2 Line 35-37, Column 5 Line 35-38 i.e. TDMA relies on time slot management). At the time of the invention, it would have been obvious to a person ordinary skill in the art to determine communication latencies amongst a plurality of reference nodes for a plurality of time-slots. The rationale would have been that regular time slot management provides consistence of measurements.

Regarding Claim 10, it is a system claim corresponding to the method claim 1, and therefore rejected under the same reason set forth in the same section of claim 1 in this paragraph.

7. Claims 2, 4, 6, 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCrady et al, U.S. Publication No 20010053699 and Vanderspool II, U.S. Patent 6108588 as applied to claims 1 and 10 above, and further in view of Ennis, Jr. et al, US Patent No. 5521907.

Regarding Claims 2 and 6, McCrady et al and Vanderspool II disclose that **issuing a send ping signal and issuing a stop signal when it recognizes a ping response between two communication nodes** (see McCrady et al Paragraph [0063-0065], [0069] e.g. [0065] Line 5-12; also a modified ACK message can be adapted to indicate a ping is received; [0069] Line 13-18); **generating a start time and an end time according to the send ping signal and the stop signals** (see McCrady et al Paragraph [0053] Line 19-29, [0065] Line 1-5); **generating a latency value according to the difference between the start time and the end time** (see McCrady et al Paragraph [0053] Line 1-12, [0065] Line 1-5). However, McCrady et al and Vanderspool II do not disclose that **storing a start time and an end time; the capability of storing a source-and-destination index for a signal; the capability of storing a generated latency value according to a source-and-destination index of a signal.** Ennis, Jr. et al from the same field of endeavor disclose that **storing a start time and an end time** (see Column 1 Line 61-64 66-67); **storing a source-and-destination index for a signal** (see Figure 1, Column 2 Line 23-25, Column 1 Line 58-61 64-67, Column 2 Line 3-6 e.g. sites A and B and direction of signal flow imply relationship of source and destination); **storing a generated latency value according to a source-and-destination index of a signal** (see Column 1 Line 26-28, Column 2 Line 3-6 9-12 e.g. according to Column 2 Line 9-12, in order to calculate an average value, multiple values must have been stored first). At the time of the invention, it would have been obvious to a person ordinary skill in the art to use Ennis, Jr. et al's invention to store and manipulate the calculated communication latency of a ping signal as described in McCrady et al's invention. The motivation would have been that a ping signal is a signal with minimum size; a ping signal

can be interleaved with voice and data signals without taking useful space during a voice or a data communication (see McCrady et al Paragraph [0029] Line 20-24), therefore it should also be handled as any data signal in a communication network without being protocol dependent (see Ennis, Jr. et al Column 1 Line 29-39).

Regarding Claim 4, McCrady et al and Vanderspool II disclose that **determining communication latencies amongst a plurality of reference nodes on a period basis** (see Vanderspool II Column 5 Line 35-38). However, McCrady et al and Vanderspool II do not disclose that **generating an average latency value.** Ennis, Jr. et al from the same field of endeavor disclose that **generating an average latency value** (see Abstract Line 15-19, Column 1 Line 56-67, Column2 Line 1-19). At the time of the invention, it would have been obvious to a person ordinary skill in the art to use Ennis, Jr. et al's invention to average the calculated communication latency of a signal as described in McCrady et al's invention. The rationale would have been that an average latency value shows a general idea of how well a portion of network performs, particularly surrounding the node, in terms of latency.

Regarding Claims 11 and 15, they system claims corresponding to the method claims 2 and 6, and therefore rejected under the same reason set forth in the same section of claims 2 and 6 in this paragraph.

8. Claims 3, 7, 12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCrady et al, U.S. Publication No 20010053699 and Vanderspool II, U.S. Patent 6108588 as

applied to claims 1 and 10 above, and further in view of Ennis, Jr. et al, US Patent No. 5521907 and Zisapel et al U.S. Publication 20030195984.

Regarding Claims 3 and 7, McCrady et al and Vanderspool II disclose that **sending a message between two communication nodes** (see McCrady et al Paragraph [0063-0065], [0069] e.g. [0063] Line 15-21); **generating a elapsing value according to the difference between the initial indicating parameter and the end indicating parameter** (see McCrady et al Paragraph [0053] Line 1-12, [0065] Line 1-5). However, McCrady et al and Vanderspool II do not disclose that **storing an initial indicating parameter and an end indicating parameter; storing a source-and-destination index for a message; storing a generated elapsing value according to a source-and-destination index of a message.** Ennis, Jr. et al from the same field of endeavor disclose that **storing an initial indicating parameter and an end indicating parameter** (see Column 1 Line 61-64 66-67); **storing a source-and-destination index for a message** (see Figure 1, Column 2 Line 23-25, Column 1 Line 58-61 64-67, Column 2 Line 3-6 e.g. sites A and B and direction of signal flow imply relationship of source and destination); **storing a generated latency value according to a source-and-destination index of a message** (see Column 1 Line 26-28, Column 2 Line 3-6 9-12 e.g. according to Column 2 Line 9-12, in order to calculate an average value, multiple values must have been stored first). At the time of the invention, it would have been obvious to a person ordinary skill in the art to use Ennis, Jr. et al's invention to store and manipulate the calculated communication elapsing value of a ping message as described in McCrady et al's invention. The motivation would have been that a ping message is a signal with minimum size; a ping message can be interleaved with voice and data

signals without taking useful space during a voice or a data communication (see McCrady et al Paragraph [0029] Line 20-24), therefore it should also be handled as any data signal in a communication network without being protocol dependent (see Ennis, Jr. et al Column 1 Line 29-39).

Regarding Claims 3 and 7, McCrady et al, Vanderspool II and Ennis, Jr. et al disclose all the limitations except that **the initial and end indicating parameters are time-to-live (TTL) protocol parameters; the elapsing value is a hop distance.** Zisapel et al from the same field of endeavor teach that **the initial and end indicating parameters are time-to-live (TTL) protocol parameters; the elapsing value is a hop distance** (see Paragraph [0021]). At the time of the invention, it would have been obvious to a person ordinary skill in the art to use TTL value provide in a data packet TTL field to calculate the elapsing distance between two communication nodes. The rationale would have been that it is common practice that a TTL field already implemented in the existing IP protocol is used to denote the number of hops between two nodes; therefore, it presents an easy solution to find out the hop distance without reinventing a new protocol.

Regarding Claims 12 and 16, they system claims corresponding to the method claims 3 and 7, and therefore rejected under the same reason set forth in the same section of claims 3 and 7 in this paragraph.

9. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCrady et al, U.S. Publication No 20010053699 and Vanderspool II, U.S. Patent 6108588 as applied to claims 1 and 10 above, and further in view of Brain and Harris (see provided documentation).

Regarding Claim 8, McCrady et al and Vanderpool II disclose that **the latency distance** (see McCrady et al Paragraph [0050-0052]). However, McCrady et al and Vanderspool II do not disclose that **approximating a geographic region within which the target node is located; identifying a first region surrounding a first reference node out to a latency distance to a second reference node.** Brain and Harris from the same field of endeavor disclose that **approximating a geographic region within which the target node is located** (see attached documentation); **identifying a first region surrounding a first reference node out to a latency distance to a second reference node** (see the attached supplement documentation from Wikipedia e.g. let points B, P1 and P2 in the figure be a target node and first and second reference nodes respectively, the radius r1, r2 and line d then represent the latency distances from the target node to the first and second reference nodes and between the two reference nodes respectively; assuming that d is ten times the r1, it is obvious to see that the point B (target node) locates within the circular region surrounding the point P1 (first reference node), similarly a region in which a target node locates surrounding the second reference node can be approximated in the same manner). At the time of the invention, it would have been obvious to a person ordinary skill in the art to use the method of trilateration to approximate a location of a target node. The rationale would have been that the underlying principle of trilateration is simple

thus the actual deployment of a system handling the process will be simple; in addition, the technique is fairly accurate.

Regarding Claim 9, Brain and Harris further disclose that **identifying a union of the first identified region and a region surrounding the second reference node out to a latency distance to either of the first reference node and a third reference node** (see the attached supplement documentation from Wikipedia e.g. following the explanation of Claim 8, if the distance d and r1 are similar in length, then the two circular regions intercept and form an union region, as shown in the figure, in which a target node may locate; further if a third reference node is considered and similar analysis follows, such that P3 and r3 represent the third reference node and the latency distance to the target node, it is clear to see that multiple union regions can be formed and the location of a target node can be approximated, namely that when two or more sets of union regions intercept and form a common region, it is the approximated region for the target node).

10. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCrady et al, U.S. Publication No 20010053699 and Vanderspool II, U.S. Patent 6108588 as applied to claims 1 and 10 above, and further in view of Ennis, Jr. et al, US Patent No. 5521907 and Dorenbosch et al U.S. Patent No. 6169903.

Regarding Claim 13, McCrady et al and Vanderpool II disclose that **the method capable of determining the communication latency amongst a plurality of reference nodes** (see

McCrady et al Paragraph [0045] Line 13-23). However, McCrady et al and Vanderspool II do not disclose that **a latency storage unit capable of storing one or more values according to indexed values; the capability of summing a current latency value with the latency values from the latency storage unit; the capability of multiplying an output from the summed latency value by an inverse of the sum of one plus the quantity of the values retrieved from the latency storage unit, wherein the multiplying result is stored in the latency storage unit.** Ennis, Jr. et al from the same field of endeavor disclose that **a latency storage unit capable of storing one or more values according to indexed values** (see Column 1 Line 26-28, Column 2 Line 3-6 9-12 e.g. according to Column 2 Line 9-12, in order to calculate an average value, multiple values must have been stored first); **the capability of summing a current latency value with the latency values from the latency storage unit** (see Abstract Line 15-19, Column 1 Line 56-67, Column2 Line 1-19 e.g. in order to calculate an average, all the considered values have to be summed first); **the capability of multiplying an output from the summed latency value by an inverse of the sum of one plus the quantity of the values retrieved from the latency storage unit, wherein the multiplying result is stored** (see Abstract Line 15-19, Column 1 Line 56-67, Column2 Line 1-19 e.g. in order to calculate an average, all the considered values have to be summed first and then divided by the number of the considered values; the multiplying process is in another words an averaging process). At the time of the invention, it would have been obvious to a person ordinary skill in the art to use Ennis, Jr. et al's invention to store the calculated communication latency of a signal as described in McCrady et al's invention. The rationale would have been that the calculated latency values could be clearly monitored according to different indexed source-destination pairs.

Regarding Claim 13, McCrady et al, Vanderpool II and Ennis, Jr. et al disclose all the limitations except that **indexed values are according to addresses for reference nodes.** Dorenbosch et al from the same field of endeavor disclose that **indexed values are according to addresses for reference nodes** (see Figure 1-2, Column 4 Line 43-57 e.g. an address represents a location). At the time of the invention, it would have been obvious to a person ordinary skill in the art to use Dorenbosch et al's invention to generate the index value to aid the storage of the calculated communication latency of a signal as described in McCrady et al and Ennis, Jr. et al's inventions. The motivation would have been that the calculated latency values could be clearly monitored according to different indexed source-destination pairs; in addition, by indexing the latency values in reference to the corresponding node locations and signal transmitting time slots, communication link performance can be better monitored and further provide better quality of serive (see Dorenbosch et Column 1 Line 31-37).

Regarding Claim 14, McCrady et al and Vanderpool II disclose that **the method capable of determining the communication latency amongst a plurality of reference nodes** (see McCrady et al Paragraph [0045] Line 13-23). However, McCrady et al and Vanderspool II do not disclose that **a latency storage unit capable of storing one or more values according to indexed values.** Ennis, Jr. et al from the same field of endeavor disclose that **a latency storage unit capable of storing one or more values according to indexed values** (see Column 1 Line 26-28, Column 2 Line 3-6 9-12 e.g. according to Column 2 Line 9-12, in order to calculate an average value, multiple values must have been stored first). At the time of the invention, it

would have been obvious to a person ordinary skill in the art to use Ennis, Jr. et al's invention to store the calculated communication latency of a signal as described in McCrady et al's invention. The rationale would have been that the calculated latency values could be clearly monitored according to different indexed source-destination pairs.

Regarding Claim 14, McCrady et al, Vanderpool II and Ennis, Jr. et al disclose all the limitations except that **indexed values are according to addresses for reference nodes and time-slots.** Dorenbosch et al from the same field of endeavor disclose that **indexed values are according to addresses for reference nodes** (see Figure 1-2, Column 4 Line 43-57 e.g. an address represents a location) **and time-slots** (see Column 4 Line 38-45). At the time of the invention, it would have been obvious to a person ordinary skill in the art to use Dorenbosch et al's invention to generate the index value to aid the storage of the calculated communication latency of a signal as described in McCrady et al and Ennis, Jr. et al's inventions. The motivation would have been that the calculated latency values could be clearly monitored according to different indexed source-destination pairs; in addition, by indexing the latency values in reference to the corresponding node locations and signal transmitting time slots, communication link performance can be better monitored and further provide better quality of serive (see Dorenbosch et Column 1 Line 31-37).

11. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCrady et al, U.S. Publication No 20010053699 and Vanderspool II, U.S. Patent 6108588 as

applied to claims 1 and 10 above, and further in view of Ennis, Jr. et al, US Patent No. 5521907 and Brain and Harris (see provided documentation).

Regarding Claim 17, McCrady et al and Vanderpool II disclose that **a reference node reports its geographic location to a target node** (see McCrady et al Paragraph [0073]). However, McCrady et al and Vanderspool II do not disclose that **the reference-and-target index; the map of the reference-and-target indexes and the corresponding information; the capability of transforming the indexes to the corresponding information.** Ennis, Jr. et al from the same field of endeavor disclose that **the reference-and-target index** (see Figure 1, Column 2 Line 23-25, Column 1 Line 58-61 64-67, Column 2 Line 3-6 e.g. sites A and B and direction of signal flow imply relationship of source and destination); **the map of the reference and target indexes and the corresponding information** (see Table 1, Column 3 Line 34-51); **the capability of transforming the indexes to the corresponding information** (see Column 5 Line 21-50). At the time of the invention, it would have been obvious to a person ordinary skill in the art to use Ennis, Jr. et al's invention to store and index the information contained in a signal as described in McCrady et al's invention. The rationale would have been that the once the collected information such as communication latency or geographic location of the sender of a signal are indexed according to its source and destination, the collected information is easier to be retrieved.

Regarding Claim 17, McCrady et al, Vanderpool II and Ennis, Jr. et al teach all the limitations except that **approximating a geographic region within which the target node is located;**

generating a first geographic location signal. Brain and Harris from the same field of endeavor disclose that **approximating a geographic region within which the target node is located** (see attached documentation); **generating a first geographic location signal** (see the attached supplement documentation from Wikipedia e.g. let points B, P1 and P2 in the figure be a target node and first and second reference nodes respectively, the radius r1, r2 and line d then represent the latency distances from the target node to the first and second reference nodes and between the two reference nodes respectively; assuming that d is ten times the r1, it is obvious to see that the point B (target node) locates within the circular region surrounding the point P1 (first reference node), similarly a region in which a target node locates surrounding the second reference node can be approximated in the same manner). At the time of the invention, it would have been obvious to a person ordinary skill in the art to use the method of trilateration to approximate a location of a target node. The motivation would have been that the underlying principle of trilateration is simple thus the actual deployment of a system handling the process will be simple; in addition, the technique is fairly accurate.

Regarding Claim 18, Brain and Harris further disclose that **generating a second geographic location signal and a location for the target node** (see the attached supplement documentation from Wikipedia e.g. following the explanation of Claim 17, if the distance d and r1 are similar in length, then the two circular regions intercept and form an union region, as shown in the figure, in which a target node may locate; further if a third reference node is considered and similar analysis follows, such that P3 and r3 represent the third reference node and the latency distance to the target node, it is clear to see that multiple union regions can be formed and the location of

a target node can be approximated, namely that when two or more sets of union regions intercept and form a common region, it is the approximated region for the target node).

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Referring to the PTO Form 892, references are cited to show similar method and system of estimating the location of a network node.

14. Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wei-po Kao whose telephone number is (571)270-3128. The examiner can normally be reached on Monday through Friday, 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

W.K.

RICKY Q. NGO
SUPERVISORY PATENT EXAMINER